Docket No. 03-LJ-064 (STMI01-03064)
Serial No. 10/714,179
Patent

REMARKS

Claims 1-7, 9-21 and 23-28 are pending in the application.

Claims 1-7, 9-21 and 23-28 have been rejected.

Claims 1 and 15 have been amended as set forth herein.

Claims 1-7, 9-21 and 23-28 remain pending in this application.

Reconsideration of the claims is respectfully requested.

I.   CLAIM REJECTIONS – 35 U.S.C. §103

Claims 1-3, 6, 7, 9, 10, 13-17, 20, 21, 23, 24, 27 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,094,715 to *Wilkinson, et al.* (hereinafter "Wilkinson") in view of U.S. Patent No. 5,881,284 to *Kubo* (hereinafter "Kubo"). Claims 4, 5, 18 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wilkinson in view of Kubo and in view of U.S. Patent No. 6,470,441 to *Pechanek, et al.* (hereinafter "Pechanek"). Claims 11, 12, 25 and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wilkinson in view of Kubo and further in view of "Mulit-thread VLIW processor architecture for HDTV decoding" to *Kim* (hereinafter "Kim"). The Applicant respectfully traverses the rejections.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a prima facie case of obviousness. MPEP § 2142, p. 2100-133 (8th ed. rev. 4, October 2005). Absent such a prima facie case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.* To establish a *prima facie* case of obviousness, three basic criteria must be met: *Id.* First, there must be some suggestion or motivation, either in the references themselves or in the

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the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *Id.* Second, there must be a reasonable expectation of success. *Id.* Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *Id.* The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *Id.*

Furthermore, when applying 35 U.S.C. 103, the claimed invention must be considered as a whole. *See MPEP § 2141(II)*. In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *MPEP § 2141.02(I), citing Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983)*. Indeed, The Supreme Court has recently held,

> [A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *KSR Intern. Co. v. Teleflex Inc., 127 S.Ct. 1727 (U.S.,2007)*.

Additionally, a proper rejection must be stated clearly and specifically. MPEP § 707.07(d), page 700-125 (8th ed. rev. 6, September 2007) ("Where a claim is refused for any reason relating to the merits thereof it should be 'rejected' and the ground of rejection fully and clearly stated...") (*Emphasis added*).

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Amended independent Claim 1 recites an apparatus including a micro single instruction multiple data (SIMD) unit and a job buffer having an output coupled to an input of the micro SIMD unit. The job buffer dynamically bundles a plurality of jobs into a task based on a control flow equivalence of the jobs and allocates the task to the micro SIMD unit. The control flow equivalence of the jobs includes concurrent execution of an instruction stream by said plurality of jobs. The Applicants respectfully submit that the cited references fail to teach or suggest the claimed job buffer.

In rejecting Claim 1, the Examiner asserts that Wilkinson teaches "a job buffer having an output coupled to an input of said micro SIMD unit, wherein said job buffer based on a control flow equivalence of said jobs and allocates said task to said SIMD unit (col. 24, lines 53-55; col. 26, lines 29-34; col. 27, lines 24-34; col. 29, lines 52-60)." *Office Action mailed April 9, 2008, page2, section 4, third paragraph.* The Applicants respectfully submit that the Examiner fails to fully and clearly state the grounds of rejection by failing to identify where Wilkinson describes a job buffer having an output coupled to an input of a SIMD unit.

The cited passages from Wilkinson are reproduced below for the Examiner's convenience:

> This synchronization provides accommodation of the data timing dependencies associated with the execution of SIMD commands and allows asynchronous operations to be performed by a PME. *Col. 24, lines 53-55.*
> * * *
> The PME data flow consists of a 16 word by 16 bit general register stack, a multi-function arithmetic/logic unit (ALU) working registers to buffer memory addresses, memory output registers, ALU output registers, operation/command, I/O output registers, and multiplexors to select inputs to the ALU and registers. *Col. 26, lines 29-34.*
> * * *
> The PME instruction decode logic permits either SIMD/MIMD operational modes,

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modes, and PMEs can transition between modes dynamically. In SIMD mode the PME receives decoded instruction information and executes that data in the next clock cycle. In MIMD mode the PME maintains a program counter PC address and uses that as the address within its own memory to fetch a 16 bit instruction. Instruction decode and execution proceeds as in most any other RISC type machine. A PME in SIMD mode enters MIMD mode when given the information that represents a decode branch. A PME in MIMD mode enters the SIMD mode upon executing a specific instruction for the transition. *Col. 27, lines 24-34.*

* * *

The PME data flow discussed with reference to FIGS. 7 and 8, may be amplified by reference to the additional sections below. In a complex system, the PME data flow uses the combination of the chip as an array node with memory, processor and I/O which sends and receives messages with the BCI that we replicate as the basic building block of an MMP built with our APAP. The MMP can handle many word lengths. *Col. 29, lines 52-60.*

The Applicant is unable to find in the cited passages any description of a job buffer having an output coupled to an input of a SIMD unit.

Furthermore, the Examiner addresses the elements of the limitation "dynamically bundles a plurality of jobs into a task based on a control flow equivalence of said jobs and allocates said task to said micro SIMD unit" piecemeal, rather than considering the invention as a whole, as required by MPEP § 2141(II). While acknowledging that Wilkinson does not describe "dynamically bundles a plurality of jobs into a task," the Examiner also takes the inconsistent position that Wilkinson does describe basing some unspecified action on a control flow equivalence of jobs and allocating the admittedly undisclosed task to a SIMD unit.

Finally, the Applicant respectfully submits that none of the cited references describes bundling jobs into a task based upon a control flow equivalence that includes the concurrent execution of an instruction stream by the jobs.

For at least these reasons, amended independent Claim 1 is patentable over the cited references.

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references. Amended independent Claim 15 recites limitations analogous to the novel and non-obvious limitations emphasized in traversing the rejection of Claim 1. Therefore, Claim 15 also is patentable over the cited references. Claims 2-7 and 9-14 depend from Claim 1, Claims 16-21 and 23-28 depend from Claim 15 and include all the limitations of their respective base claims. As such, Claims 2-7, 9-14, 16-21, and 23-28 also are patentable over the cited references.

Accordingly, the Applicant respectfully requests that the Examiner withdraw the §103 rejection with respect to Claims 1-7, 9-21 and 23-28.

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CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining Claims in the Application are in condition for allowance, and respectfully requests an early allowance of such Claims.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@munckcarter.com.*

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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